

DECISION RECORD
and
FINDING OF NO SIGNIFICANT IMPACT
for the
Pryor Mountain Wild Horse Range
FY2004: Fertility Control on Age-Specific Wild Horse Mares
EA # MT-010-04-18

I. DECISION

Compassionate-use* of Fertility Control on Yearling Mares, Two-Year Old Mares and Mares 14 Years of Age and Older

Purely from the standpoint of **compassionate-use*** of fertility control, the Billings Field Manager has made the decision that 16 age-specific younger and older mares, currently on the Pryor Mountain Wild Horse Range, receive a single-dose (primer) of PZP contraceptive vaccine with a follow-up booster at least one month later (Figure 1). These mares include 5 yearling fillies, 4 two-year old fillies and 7 fourteen years of age and older mares. Five other fillies originally included are currently missing, and presumed dead. Any mares, which received a primer injection during FY2003 efforts, will only receive a booster vaccine this summer. This remotely-delivered two-shot application offers 90% efficacy for one –year only, and is necessary as the primer dose simply acts to enhance the immune system response and does not generally confer infertility.

The intent of this action (described as the Proposed Action in EA # MT-010-04-18; available on the website <http://www.mt.blm.gov/bifo/whb/doc2.html>) is to provide one year of infertility, in order to give the young mares an opportunity to fully mature before becoming pregnant, or to fully recover before becoming pregnant again. Fertility control provided in the summer of 2004 would impact 2005 pregnancies only. Since 1996, several young mares have lost their foals. In fewer cases, both mare and foal died. Other young mares have suffered serious injuries presumably during a prolonged or difficult labor. All of these young mares were in poor body condition post-foaling (1-2 condition factor, out of a possible 5), in stark contrast to young mares that were naturally delayed in foal production. Several of these mares have taken 1-2 years to improve their condition. The intent of this action is to improve the health of these mares during this time period in their life when they are most vulnerable to significant impacts on their health and well-being.

Compassionate-use contraception for the older mares will permit a year or more of existence on the range in better physical condition. These mares have already had 12 years of reproductive activity in order to contribute to the genetics of the herd. The long-term intent will be to contracept them for the remainder of their lives. As foal production generally ceases by the 16th year on the Pryors, this may result in the loss of a very limited number of foals from their lifetime contribution. The intent of this action is to improve the health of these mares during this time period in their life when they are most vulnerable to significant impacts on their health and well-being.

The proposed fertility control implementation is scheduled to begin no earlier than July 12, 2004 and will continue until all identified mares are successfully treated. All fertility control activity would be carried out according to current BLM and the Science and Conservation Center (ZooMontana) policy with the intent of conducting as safe and humane an operation as possible. In addition, the Proposed Action would also adhere to all guidance and research protocol set by the BLM National Wild Horse Fertility Control Field Trial program. Recommended actions incorporate proven protocol or standard operating procedures (SOPs), which have been developed for remote-delivery techniques of fertility control vaccine (FY2004 PZP EA, Appendix 2). These SOPs represent the “best methods” for ensuring quality results, minimizing risks and reducing impacts associated with this activity. If conditions warrant, and animal health or welfare is in jeopardy at any time, remote-darting operations would be delayed or halted.

***Compassionate-use is defined as “the use of a tool (or in this case a fertility control agent) to improve the quality of life of another (in this case a younger or older wild mare).”**

II. ALTERNATIVES CONSIDERED

The Proposed Action and two alternatives represent a reasonable range of alternatives based on issues and goals previously identified through public scoping efforts and research specific to the PMWHR. The EA considered only one alternative in detail, the Proposed Management Action: Compassionate-use of Fertility Control on Yearling Mares, Two-Year Old Mares and Mares 14 Years of Age and Older. All other alternatives were considered up to the point where BLM determined the alternative would result in either unacceptable (measurable) impacts to the wild horse herd, or provided no additional measurable value to a previously analyzed alternative. Reasons for elimination from further consideration are provided in the EA under the relevant sections (EA #MT-010-04-18, Section IV. Alternative Management Actions, pp 12-13).

III. USE AUTHORITY for the PZP VACCINE

The Humane Society of the United States (HSUS) has made the PZP vaccine available to the BLM under the Investigational New Animal Drug exemption (INAD #8857) filed with the federal Food and Drug Administration (FDA). As a condition of using the PZP vaccine, the HSUS expects the BLM to follow the Draft Criteria for Immunocontraceptive Use in Wild Horse Herds recommended by the Wild Horse and Burro National Advisory Board in August 1999. BiFO, in its management of the PMWHR, is in full compliance with all pertaining criteria. The Proposed Action would also adhere to all guidance and research protocol set by the BLM National Wild Horse Fertility Control Field Trial program.

IV. OVERSIGHT provided by the WILD HORSE FERTILITY CONTROL FIELD TRIAL PROGRAM

The BLM National Wild Horse Fertility Control Field Trial program requires close monitoring of all treated populations in order to evaluate management-level use of the fertility control vaccine under a research protocol. On the Pryors, any wild mares receiving the vaccine will be individually-identified and tracked regularly with data non-intrusively gathered on behavior, estrous, fertility, reproduction, survival, and any health concerns. The field studies will be conducted by seasonal and term USGS-BRD and BLM biological technicians under the supervision of BRD research biologists and the BLM Wild Horse and Burro Specialist.

V. IMPACTS on HERD SIZE and VIABILITY

Specific details regarding the appropriate management level (AML) for the herd, demographics, genetic viability, and reproductive fitness were addressed within EAs # MT-010-01-44, MT-010-02-22, MT-010-03-14 and MT-010-04-18. These documents are available on the website <http://www.mt.blm.gov/bifo/whb/doc2.html> or by contacting BiFO. Readers have been encouraged to review these documents for relevant information.

Since the beginning of management records (Table 1), the herd has averaged 145 total horses. In the last decade the herd has averaged 155 total horses. These averages are about 50% above the current appropriate management level (AML) of $95 \pm 10\%$ adult horses set in 1992. Current monitoring places the population at 161 total horses with 13 foals, 11 yearlings and 137 adults as of June, 2, 2004 (Figure 1). This monitoring, which includes the impacts of winter (2003-2004) mortality and 2004 foal births, shows that 11 yearlings are missing and presumed dead. Five of the missing yearlings are female and will not be targeted for fertility control unless they reappear during the summer. Several family groups (3 lower and 1 upper elevation) and 8 bachelors have yet to be found, but most animals are presumed to be alive (Figure 1).

A minimum of ~30 foals are expected this year with 18 born to date and 5 already lost to natural mortality. At least 12 more foals are still expected by late summer. These estimates will likely place herd size at or about 165-170 total

horses after the foaling season. Historical data indicates that a herd ranging from 87 to 200 horses has supported sufficient genetic diversity in the herd. Furthermore, any management action that serves to delay the age of first reproduction for mares (e.g. by contracepting young mares) is known to reduce the total loss of genetic material from the herd and to conserve genetic variation over time (Gross, 2000).

Intensive, long-term studies have shown that mares aged 3-13 years appear to primarily contribute to foal production in the Pryors and, in general, yearling conception is limited. Previous fertility control treatment resulted in no foals being produced by three-year olds in 2003 only. Foal survival (1996-2003) has been impacted as much as 30% by mountain lion and black bear predation as well as mare interchange related foal injuries and foal abandonment. This impact has been variable and has been tracked very closely in the last eight years. There is currently no evidence that additional predators, other than those already identified, are impacting the horses.

There is no evidence that current levels of foal loss (or yearling loss) will have serious impacts on herd viability. Natural predation must impact over 70% of the foal crop on a repeated annual basis for these impacts to even stabilize herd growth rates. This represents the best data that we have from mountain lion predation on the Montgomery Pass Wild Horse Territory (Turner et al., 1992). Furthermore, fertility control must be used on 60 to 80% of all breeding age mares in order to even stabilize herd growth rates. This represents the best data that we have from the management application of fertility control to the Assateague Island National Seashore horses. These impacts are far above those currently happening or proposed for the PMWHR.

Fertility control provided in late summer of 2004 would impact 2005 pregnancies only. Any mares which conceive this year will not have their pregnancies disrupted by the PZP vaccine. BLM has deliberately selected the conventional PZP approach (primer/annual booster) for this herd, due to the dramatic drop in immune response after one year. As a result, 90% of the mares receiving boosters for two consecutive years (in late summer) should return to fertility the first year following cessation of treatment. Thus the six 4-year old mares should be able to conceive this year, and the eight 3-year old mares should be able to conceive in 2005. We do not anticipate a multiple year lag effect that has been detected with the time release pellet version of the PZP vaccine.

Cumulative impacts of the proposed action and existing levels of natural mortality have been evaluated for herd demographics (including size, age structure and sex ratio) using WinEquus (Wild Horse Population Model Version 1.4; April 2, 2002). This is a national BLM Wild Horse and Burro policy requirement. Impacts have been determined to be acceptable and do not appear to place the herd at risk for loss of viability. Details on parameters and output for specific population modeling runs are on file at the Billings Field Office (BiFO).

VI. IMPACT on MARE PHYSIOLOGY

From a mare physiological standpoint, PZP contraception has no impact on mare hormone secretion or developing endocrine systems. It operates as an immune response only and appears to have only temporary effects. Most development of reproductive systems, including lifetime oocyte count in the ovary, is done during the fetal stage. Research has shown that PZP has no negative impacts on the developing fetus and ensuing post-birth fertility. Thus, if a filly is not yet sexually mature, there will be no negative impacts on her normal reproductive development. Research has shown that PZP does not appear to cause ill effects on ovarian function unless contraception is actively repeated for more than five consecutive years on a given mare. Thus, a single primer and booster vaccine dose is not expected to result in any negative physiological impacts to yearling and two-year old mares and/or older, more mature mares.

VII. PUBLIC INPUT

Seventeen letters and email were received by the Billings Field office (BiFO) in response to EA # MT-010-04-18 for the FY2004 proposed fertility control on the PMWHR. A list of individuals and groups that have responded are on file at BiFO as are all original submitted documents. Public members using Freedom of Information Act (FOIA)

procedures may request these documents. Details can be provided by contacting BiFO.

All submissions were reviewed and comments and concerns were consolidated for BLM consideration. The public is reminded that in some cases similar concerns were raised for previous EAs regarding the use of fertility control on the Pryors, and were responded to in subsequent Decision Records. These response documents are available on the website: <http://www.mt.blm.gov/bifo/whb/doc2.html> or by contacting BiFO.

The primary concern raised in public comments for this EA related to viable population size and existing levels of natural mortality. Public members felt that fertility control on age-specific younger and older mares, in combination with existing levels of natural mortality, would limit population growth to below viable levels over time. We believe we have analyzed these impacts and have responded to these concerns in the above section on herd size and viability. Another comment questioned the unbalanced sex ratio, but BiFO does not feel that the existing ratio of 78 females to 83 males is unbalanced. An additional letter objected to the use of the term “Burro” in Wild Horse and Burro Program. We emphasize that management of the PMWHR falls under the auspices of the national BLM Wild Horse and Burro Program. This is despite the fact that no burros exist on the PMWHR. Other public did recognize many benefits of fertility control, either for compassionate-use or population control, including but not limited to:

- an essential tool for population management
- reduces the rate of population growth
- may extend the time period between gather cycles
- results in fewer disturbances to populations
- reduces budgetary demands
- reduces the number of animals in the national adoption pipeline
- helps achieve minimum feasible level of management
- increases mare fitness and health
- may enhance genetic viability of the herd.

VIII. FINDING of NO SIGNIFICANT IMPACT

BLM has reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. BLM has determined that the Proposed Action will not have any significant impacts on the human environment and that an EIS is not required. BLM finds that implementation of the Proposed Action would not result in unnecessary or undue degradation of the Public Lands. BLM has determined that the Proposed Action is in conformance with the appropriate and approved land use plans.

IX. APPEALS

Within 30 days of the date of the Decision, you have the right of appeal to the Board of Land Appeals, Office of the Secretary, in accordance with the regulation at 43 CFR, Part 4, Subpart E and 43 CFR 4770.3(a) and (c). If an appeal is taken, your notice of appeal must be filed in the Billings Field Office, P.O. Box 36800 (5001 Southgate Drive), Billings, Montana, 59107. Within 30 days after filing a Notice of Appeal, you are required to provide a complete statement of the reasons why you are appealing. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the Notice of Appeal and Petition for a Stay must be submitted to (1) the Interior Board of Land Appeals, Office of Hearing and Appeals, U.S Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203, (2) the Field Solicitor's Office, Pacific Northwest Region, PO Box 31394 (316 North 26th Street), Billings, MT, 59107 and (3) Billings Field Office, P.O. Box 36800 (5001 Southgate Drive), Billings, Montana, 59107. The original documents should be filed with this latter office. If you request a stay, you have the

burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on merits;
3. The likelihood of immediate and irreparable harm if the stay is not granted; and
4. Whether the public interest favors granting the stay.

X. SIGNATURES

Prepared by:

PMWHR Manager
State Wild Horse and Burro Specialist
Billings, MT

Date_____

Approved by:

Billings Field Manager
Billings Field Office
Billings, MT

Date_____

XI. REFERENCES

Gross, J.E. (2000) Genetic and Demographic Consequences of Removals and Contraception on Wild Horses in the PMWHR. pp 105-120. (in) Singer, F.J. and K.A. Schoenecker, compilers (2000) Managers' Summary - Ecological Studies of the Pryor Mountain Wild Horse Range, 1992-1997. U.S. Geological Survey, Midcontinent Ecological Science Center, Ft. Collins, CO. 131 pp.

Turner, J.W., Wolfe, M.L., and J.F. Kirkpatrick (1992) Seasonal Mountain Lion Predation on a Feral Horse Population. Can. J. Zool. 70: 929-934.

**Mountain Wild
Horse**

Table 1:

Pryor

Population

Demographics

1971-2003

<u>Date</u>	<u>Live Foals</u>	<u>Recorded Mortality</u>	<u>Removals</u>	<u>Annual Count**</u>	<u>Adopted</u>
Pre-1971	n/a	n/a	60	~200	n/a
1971	n/a	n/a	45	~155	35
1973	11	n/a	35	~120	35
1975	11	15	25	~140	25
1977	26	0	25	~145	25
1978	15	~72	0	~87	0
1979	23	5	0	105	0
1980	27	7	1	127	1
1981	35	1	6	155	6
1982	35	3	43	144	43
1983	30	6	21	147	21
1984	25	18	13	141	13
1985	25	2	25	139	25
1986	29	13	0	155	0
1987	32	17	23	147	23
1988	26	17	26	130	26
1989	20	12	21	122	21
1990	32	n/a	3	133	3
1991	28	5	16	120	16
1992	38	n/a	46	115	46
1993	22	n/a	1	143	1
1994	34	3	51	118	51
1995	28	0	0	146	0
1996	29	5	0	175	0
1997	32	4	46	147	46
1998	23	4	0	158	0
1999	26	23	1	173	1
2000	27	18	0	188	0
2001	27	27	46	160	46
2002	23	18	0	170	0
2003	22	30	7	161	7

n/a Indicates No Data

All Data Approximate Numbers

****Annual Count = Fall Post foaling and Post cull
(1995 and on)**

Recorded Mortality includes foal mortality.

Does not include uncertain status animals